

The patent law says that an inventor is entitled to a patent unless the invention is anticipated or obvious. Since the claims define the invention, a reference must show every limitation of the claims. The claims in this application specify "compound semiconductor" materials. {Other semiconductor materials are single element materials such as silicon or germanium. Because the reference fails to show compound semiconductor materials as called for in the claims, the rejection is illegal and must be withdrawn. }

The rejection relies on the reference not limiting itself to any one material. Such an observation is relevant only to rejections made under 35 USC 103. The failure of the reference to disclose compound semiconductor material wholly removes it from the ambit of 35 USC 102.

The rejection appears to assume that all structures and processes for handling any semiconductor material anticipate or make obvious structures and processes for handling compound semiconductor material. That is clearly not the law. Indeed, if true, it would mean that all generic inventions anticipate species inventions or make them obvious. Here the Background of Application shows how compound semiconductor materials require different handling. There is problem with making ohmic contact to silicon carbide. Conventional techniques are inadequate for making contact to compound semiconductor material, in particular, to silicon carbide.

Even assuming *arguendo* that the reference disclosed compound semiconductor materials, the reference fails to show or suggest the claimed four-material limitation and the interrelationships of the claimed materials.

The reference does not have an "opening" in its third layer defined by elements 24, 25 and 26. The rejection uses those elements (26, 25, and 24) to establish an opening in layer 19. But there is no opening in layer 19. Layer 19 is nowhere penetrated and remains integral and unopened. An opening is an aperture, hole or gap. The regions 24, 25 and 26 are not a hole or a gap in layer 19. Indeed, layer 19 proceeds all the way to the surface. It may be narrowed, but it is not pieced or otherwise penetrated by another material.

The rejection identifies only three layers. Layer 25 is part of drift region 17.

The limitation in the claim calls for the opening to contact the second layer that the rejection identifies as layer 17. The rejection is based on an erroneous construction of region 25 as separate from layer 17. They are not. Region 25 is part of the drift layer 17.

Because there is no opening, the insulating layer 24 is not within an opening. An objective reading of the reference would show that the only "opening" is one in the insulation layer 24. A portion of layer 19 protrudes through the opening in layer 24 and terminates on

the surface. That structure is contrary to the claims and does not show or suggest the invention.

The reference fails to show or suggest the particular materials specified in claims 10 and 11. For the same reasons given above, those claims are patentable over the reference.


Claim 12 is not shown or suggested by the reference. The claim calls for contacts (plural) but the reference shows only one contact 20 to layers 26 and 19. The separate contacts (plural) of the claims are an advantage of the invention. The reference is limited to applying the same voltage to both of its third and fourth materials. In contrast, the invention may apply different voltage because it provides more than one contact.

The remaining dependent claims are patentable over the art of record for the reasons given above for the claims from which they depend.

A notice of allowance is requested.

Respectfully submitted,

Dated: 10/1/02


Thomas R. FitzGerald
Registration No. 26,730

Thomas R. FitzGerald, Esq.
16 E. Main Street, Suite 210
Rochester, New York 14614-1803
Telephone: (585) 454-2250
Fax: (585) 454-6364